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Priming Unconscious Racial Stereotypes About Adolescent Offenders

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Two studies examined unconscious racial stereotypes of decision makers in the juvenile justice system. Police officers (Experiment 1) and juvenile probation officers (Experiment 2) were subliminally exposed to words related to the category Black or to words neutral with respect to race. In a presumably unrelated task, officers read 2 vignettes about a hypothetical adolescent who allegedly committed either a property crime (shoplifting from a convenience store) or an interpersonal crime (assaulting a peer). The race of the offender was left unstated and the scenarios were ambiguous about the causes of the crime. Respondents rated the hypothetical offender on a number of traits (e.g., hostility and immaturity) and made judgments about culpability, expected recidivism, and deserved punishment. They also completed a self-report measure of conscious attitudes about race. As hypothesized, officers in the racial prime condition reported more negative trait ratings, greater culpability, and expected recidivism, and they endorsed harsher punishment than did officers in the neutral condition. The effects of the racial primes were not moderated by consciously held attitudes about African Americans. The implications of the findings for racial disparity in the juvenile justice system and for changing unconscious stereotypes were discussed.

KEY WORDS: stereotypes; adolescents; offenders.

Rates of violent crime appear to be easing back up following an unexpected decline in the late 1990s. That increase has raised new concern about the treatment of ethnic minority offenders, particularly African American males, who continue to be disproportionately represented in both the adult and juvenile justice systems. In the juvenile system, which is the focus of this paper, racial disproportionality is evident across all decision points, from arrest to disposition. For example, African American youth age 10–17 comprise about 15% of their age group in the population, yet they represent about 25% of all juvenile arrests, 30% of referrals to juvenile court, 40%

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of all incarcerated juveniles, and close to 60% of waivers to adult criminal court (Jones & Poe-Yamagata, 2000; McCord, Widom, & Crowell, 2001). Stated in comparative racial terms, Black youths are three to five times more likely than Whites to be confined in the penal system (McCord et al., 2001).

Some of that racial disparity can be traced to the fact that African American adolescents are more likely than Whites to be arrested for and convicted of serious crimes. However, there is also evidence of racial bias because African American offenders often receive harsher sentences than do Whites, even after controlling for legal variables like crime severity and prior offense history (Leonard, Pope, & Feyerherm, 1995). Some criminologists have argued that legally relevant variables account for only 25% of the variance in the disposition of juvenile cases, which raises the possibility that race and other unknown factors can influence decision-making in unpredictable ways (Feld, 1995).

Social psychological approaches to racial disparity in the juvenile justice system have focused on decisions makers' perceptions of ethnic minority offenders—such as how dangerous they are, the causes of their crime, and their likelihood of reoffending—as key factors that might explain why African American youth receive harsher treatment as they penetrate the system. For example, Bridges and Steen (1998) conducted a content analysis of probation officers' written reports about juvenile cases to test the hypothesis that offender race affects attributions about the cause of offending and the perceived risk of reoffending. Controlling for crime severity and offending history, the results showed that probation officers attributed the crimes of African American male youths more to internal causes such as negative personality traits (e.g., being unremorseful) and the crimes of White youth more to external or environmental causes (e.g., deviant peers or a dysfunctional family). Internal causes, in turn, predicted greater perception that the youth would reoffend and harsher punishment recommendations. Bridges and Steen (1998) suggested that particular attributions about crime might reflect the stereotypes that decision makers hold about African American youthful offenders.

The research reported here elaborates an attributional approach to racial disparities in the juvenile justice system by incorporating recent insights from social psychology on the content and function of stereotypes. There are three parts to our analysis. First, we argue that the most prevalent stereotypes about African Americans in this culture are negative. Second, we propose that those stereotypes operate largely at an unconscious level. Third, we suggest that unconscious stereotypes, once activated, influence the attributions that perceivers make about the causes of crime, and those attributions, in turn, predict treatment of juvenile offenders. The empirical literature supporting each of the three propositions is discussed in turn.

The Content of Racial Stereotypes

Stereotypes are culturally shared beliefs, both positive and negative, about the characteristics and behaviors of particular groups (see review in Fiske, 1998). For example, the notion that Asians are studious, blondes have more fun, fat people are jolly, or adolescents are victims of "raging hormones" are part of our culturally endorsed beliefs about the attributes of those social groups. An important distinction

has been made in the stereotype literature between one's own privately held beliefs about members of social groups (personal stereotypes) and the consensual or shared understanding of those groups (cultural stereotypes), for the latter are primarily of interest in the present research. There is much evidence that the cultural stereotypes of African Americans remain largely negative. Even though privately held beliefs about African Americans have become more positive over the last 50 years (e.g., Schuman, Steeh, Bobo, & Krysan, 1997), studies of cultural stereotypes continue to show that respondents associate being Black (and male) with hostility, aggressiveness, violence, and danger (e.g., Correll, Park, Judd, & Wittenbrink, 2002; Devine & Elliot, 1995; Dovidio, Evans, & Tyler, 1986; Krueger, 1996).

We believe that these racial stereotypes play out in particular ways when applied to legal decisions about African American youthful offenders, and that those decisions are discrepant with society's view of adolescence. The social consensus about adolescence is that this is a developmental period characterized by vulnerability, malleability, and immaturity in judgment (e.g., Cauffman & Steinberg, 2000). Indeed, the whole basis of the juvenile justice system is that adolescents are different from adults and therefore should not be held to adult standards in the assignment of blame and punishment for their transgressions (Scott & Steinberg, 2003; Steinberg & Scott, 2003). In the case of African American youthful offenders, however, we hypothesize that the shared cultural belief about adolescents (that they are immature and less culpable than adults) is superceded by another more pernicious belief (that they are violent, aggressive, dangerous, and possess adult-like criminal intent). Media portrayals of ethnic minority youth especially reinforce the public consensus that juvenile crime is violent and that the main perpetrators are African American (Dorfman & Schiraldi, 2001; Gilliam & Bales, 2001).

Stereotypes as Unconscious Beliefs

Traditional views of racial stereotyping assumed that perceivers are aware of their biases and that they can control their onset and offset (Fiske, 1998). However, there is a growing and persuasive literature in social psychology documenting that stereotypes can be activated and used outside of conscious awareness (e.g., Greenwald & Banaji, 1995). Unconscious processes have a number of characteristics. They are *unintentional* because they are not planned responses; *involuntary*, because they occur automatically in the presence of an environmental cue; and *effortless*, in that they do not deplete an individual's limited information processing resources (Bargh, 1994; Bargh & Chartrand, 1999; Fiske & Taylor, 1991). Those characteristics can be contrasted with conscious processes, or mental activities of which the person is aware, that they intend, that they volitionally control, and that require effort.

The view of stereotypes as largely unconscious is consistent with social cognition research on the cognitive heuristics or shortcuts that perceivers employ to manage the vast amount of social information with which they must deal (Fiske & Taylor, 1991). By filtering information, filling in missing data, and automatically categorizing people according to cultural stereotypes, perceivers can manage information overload and make social decisions more efficiently and easily. Drawing on the social cognitive literature, the second part of our analysis is that the racial stereotyping that occurs

in the juvenile justice system is largely an unconscious process. Particularly among perceivers at the front end of the system, like police officers, decisions often must be made quickly, under conditions of cognitive and emotional overload (e.g., perceived threat), where much ambiguity exists, and with few informational cues other than the appearance or demeanor of the accused. These are the very conditions that are known to activate unconscious beliefs (Fiske, 1998; Schaller, Park, & Mueller, 2003).

Accompanying theoretical developments on the nature of stereotyping have been new experimental methods for studying unconscious processes (Bargh & Chartrand, 2000). These methods allow a researcher to activate a stereotype without any awareness on the part of the participant as in subliminal priming, and then demonstrate that the activated stereotype influenced that participant's judgment or behavior in a completely unrelated task. For example, in a widely cited study whose methods we adapted in the present research, Devine (1989) subliminally primed college students with lists that consisted primarily of words semantically related to the social category of *Black* (e.g., afro, slavery, ghetto) or word lists mainly neutral with respect to race. On a computer screen, those words were presented very rapidly in participants' peripheral visual field so that they could not consciously identify the content of the primes. In a subsequent and presumably unrelated impression formation task, participants read a paragraph about a race-unspecified male character named Donald who engaged in behavior that was ambiguous with regard to hostility and then rated Donald on a number of traits. Participants primed with the race category were more likely to rate Donald as hostile than were participants in the neutral word condition. Other studies using different primes, such as subliminally presented Black and White faces, have reported more hostility-related attitudes and behavior among participants who were primed to think about African Americans (e.g., Bargh, Chen, & Burrows, 1996; Chen & Bargh, 1997; Dovidio, Kawakami, Johnson, & Howard, 1997; Payne, 2001).

Stereotypes Influence Conscious Processes

The third part of our argument is that unconscious racial stereotypes, once activated, then influence conscious processes—in this case, attributions and attribution-related inferences about the causes of crime. The perceived causes of events have a small set of underlying properties that are labeled causal dimensions (Weiner, 1985, 1995). These are *locus*, or whether a cause is internal or external to a person; *stability*, which designates a cause as constant or varying over time; and *controllability*, or whether a cause is subject to volitional influence. Bridges and Steen's (1998) research on probation officers' attributions focused on the locus dimension as a predictor of sentencing recommendations about adolescent offenders, but we believe that attributions to controllability and stability offer a richer analysis. Consider, for example, two presumably internal causes for an adolescent crime: being mentally retarded versus having an antisocial personality. Although internal in locus, these two attributions can elicit quite disparate evaluations from others. For example, the antisocial youth is likely to be judged as more blameworthy and treated more harshly than the mentally retarded youth because negative personality traits are generally perceived as more controllable than the low aptitude associated with mental retardation. From

an attributional perspective, the controllability dimension is primarily linked to inferences about responsibility, culpability, and blameworthiness in others (Weiner, 1995).

On the other hand, the antisocial youth in the above example might be perceived as more amenable to change than his disabled counterpart because mental retardation is a chronic condition that is both uncontrollable and stable across time. From an attributional perspective, stable causes of failure lead to more certainty (greater expectancy) that failure will occur again than do unstable causes (Weiner, 1985). Expectancy has much overlap with risk perception and amenability to change. For example, research by Carroll and his colleagues found that parole officers who attributed the causes of adults' crimes to unstable causes were more likely to recommend release from confinement than were parole officials who attributed the offender's crime to stable causes (Carroll & Payne, 1977; Carroll & Wiener, 1982).

To summarize, the analysis outlined above suggests that decision makers may have negative stereotypes about African American adolescent offenders that can be activated outside of conscious awareness; that stereotypes evoke attributions about the causes of the offender's behavior, and that particular kinds of attributions result in harsher treatment. Thus racial disparity in the juvenile justice system might be the end result of a complex attributional process that begins with the automatic activation of a negative stereotype and ends with a more punitive stance toward African American offenders.

Overview of Experiments

The two studies reported here examined the hypothesis that unconscious racial stereotypes can affect how police officers (Experiment 1) and juvenile probation officers (Experiment 2) perceive and subsequently treat juvenile offenders. Thus we studied actual decision makers in the juvenile justice system rather than college students, who are the typical population in most research on unconscious beliefs. We adapted the experimental methods of Devine (1989) to activate racial stereotypes by means of subliminally primed words associated with the category *Black*. In a presumably unrelated task, participants read two vignettes about a hypothetical adolescent who allegedly committed either a property crime (shoplifting from a convenience store) or an interpersonal crime (assaulting a peer). The race of the offender was left unstated and the scenarios were ambiguous about the causes of the crime. Respondents rated the hypothetical offender on a number of traits (e.g., hostility and immaturity) and they made judgments about the offender's culpability, expected recidivism, and deserved punishment. We predicted that officers in the racial prime condition would give more negative trait ratings, report greater culpability and expected recidivism, and endorse harsher treatment than officers in the neutral condition. In choosing our dependent variables, we were not directly studying the perceived causes of adolescent crime, but rather a set of attribution-related inferences that are relevant to criminal decision-making.

Some researchers have argued that unconscious stereotypes can affect judgment and behavior irrespective of the level of consciously reported prejudice (Correll et al., 2002; Devine, 1989). However, other researchers have proposed a moderating

effect of conscious beliefs such that priming effects should be more evident in highly prejudiced individuals (e.g., Amodio, Harmon-Jones, & Devine, 2003; Lepore & Brown, 1997; Payne, 2001). To test the hypothesis that explicitly reported prejudice or the desire to avoid prejudice moderates the effects of unconscious stereotypes, self-report measures of attitudes about race and prejudice were administered following the scenarios.

EXPERIMENT 1: POLICE OFFICERS

Method

Participants

Participants were 105 active police officers (90 males and 15 females, *M* age = 35.2 years) who were recruited from the precinct station to which they reported for duty. The ethnically diverse sample was 38% Latino ($n = 40$), 27% African American ($n = 28$), 26% Caucasian ($n = 27$), and 9% ($n = 10$) comprising individuals who self-identified as either Asian or biracial. Participants' average years of service on the force was 8.13 years.

Procedure

With the consent of the precinct captain, flyers were posted inviting officers to sign up for a study on how police officers make decisions about juvenile suspects. We also attended several roll calls over a 1-week period to present the study in person and invite participation. Officers were informed that the study would consist of individual interviews, partly administered on a computer, that would require about 45 min of their time. In return, participants would receive $50. All interviews were conducted during the officers' off-duty hours by a graduate student researcher in an unoccupied office at the precinct.

Upon arrival, participants were reminded that the study was about how people in the justice system make decisions about juvenile suspects. They were then told that the study consisted of three components: a mind-clearing task on a laptop computer (Mac Powerbook G3/400; 14.1-in. active-matrix display), evaluation of two juvenile suspects described in two written crime reports, and a questionnaire regarding their opinions on certain social and political issues that may be relevant to what people believe about crime. Participants were told that it would be a good idea to clear their minds before reading the first crime report, and that research has shown that performing a simple visual task—as in the tracking of objects in the visual field—was a good way to clear the mind. Therefore, participants first completed a task that required them to identify as quickly as possible where a string of letters appeared on a computer screen. After completing that task, which was actually the priming procedure, participants read the first crime report and responded to a series of questions (dependent variables) regarding the juvenile suspect featured in the report. They then repeated the entire procedure with a second set of primes and a different crime report. In the third part of the study, participants completed a number of

questions probing their memory of the events in the crime report and the opinion questionnaire, which was the measure of conscious prejudice.

Priming Manipulation. The priming manipulation used procedures adapted from Devine (1989) and similar subliminal priming studies using words as stimuli (Abreu, 1999; Lepore & Brown, 1997). Participants were randomly assigned to a condition in which they were subliminally exposed to words related to the category *Black* or to a condition that was neutral with respect to ethnicity. Each trial began with a fixation point of three asterisks that appeared in the center of the screen for approximately 1000 ms. A prime word then flashed for 150 ms, followed immediately by a random string of 13 letters, flashed for 60 ms, that served as a backward mask. Masking is needed to overwrite the respondent's visual buffer; that is, the fact that a stimulus can remain in the perceiver's visual iconic memory even after it has physically disappeared (Bargh & Chartrand, 2000). Extensive pilot testing was conducted to arrive at a presentation time that would allow the primes to be detectable but not identifiable; that is, outside of conscious awareness. The prime word and mask were flashed in one of the four corners of the computer screen in the respondent's peripheral (parafoveal) visual field. The center of the prime and mask presentation were offset from the center of the screen 3.25 in. horizontally and 2.50 in. vertically. While keeping their eyes focused on the asterisks in the center of the screen, participants were instructed to press the key labeled "L" if the word string appeared in one of the quadrants on the left side, and the key labeled "R" if the string appeared in one of the quadrants on the right side.[4] A beep after each response indicated whether the judgment was correct or incorrect. Each trial was separated by an interval of approximately 550 ms during which time the screen was blank. Following four practice trials, participants completed 80 experimental trials. After the last trial a screen appeared that prompted the participants to read the first crime report and complete the questions that followed. The priming procedure was then repeated with a different set of stimulus words and participants responded to the second crime report.

The 80 experimental trials that preceded each scenario were generated by repeating 16 prime words in five randomly arranged blocks of trials. In the racial priming condition that activated the category *Black*, there were two lists of 16 words that were either category labels or category-evoking words (e.g., *Harlem, homeboy, dreadlocks, basketball*).[5] Similarly, there were two lists of 16 race-neutral words, half positive and half negative, that were used to generate two 80-trial lists for the control

[4]Parafoveal priming requires that participants keep their eyes focused on the fixation point. If they move their eyes off of that point and around the quadrants of the screen, it is possible that they could "catch" a prime and thereby consciously see its content. Because the normal speed of saccadic jumps of the eye from one location to another is about 220 ms (Bargh & Chartrand, 2000), our use of a 150-ms parafoveal presentation time minimized the likelihood that the content of the primes could be detected. During debriefing, only two participants across two studies suspected that the flashing letters might be words, but neither could identify the content of any word.

[5]The 16 race prime words in the first list were *graffiti, Harlem, homeboy, jerricurl, minority, mulatto, negro, rap, segregation, basketball, black, Cosby, gospel, hood, Jamaica, and roots*. The words in the second list were *afro, Oprah, islam, Haiti, pimp, dreadlocks, plantation, slum, Tyson, welfare, athlete, ghetto, calypso, reggae, rhythm, and soul*. The 16 words in the first race-neutral list were *baby, enjoyment, heaven, kindness, summer, sunset, truth, playful, accident, coffin, devil, funeral, horror, mosquito, stress, and toothache*. The words in the second list were *warmth, trust, sunrise, rainbow, pleasure, paradise, laughter, birthday, virus, paralysis, loneliness, jealousy, hell, execution, death, and agony*.

condition (e.g., *heaven, kindness, devil, loneliness*). The order of presenting the two lists in each condition was counterbalanced.

Crime Reports. Two vignettes, written in the style of a crime report where police officers had been called to the scene, described male adolescents who allegedly committed a crime. The circumstances surrounding the offense were portrayed as ambiguous and the ethnicity of the suspect was not given in either report. In the first vignette, the offender (Suspect A) was described as a 12-year-old boy with no prior record who allegedly stole $40 worth of toys from a convenience store. The store manager accused the youth, but the youth denied the crime and there were no witnesses. In the second vignette a 15-year-old boy (Suspect B) allegedly assaulted a 16-year-old peer. But it was unclear, according to statements by witnesses, who actually initiated the conflict or whether the suspect had been provoked by the victim and was acting in self-defense. We purposely chose relatively mild property and person offenses so that a range of options would be possible (e.g., let the suspect go with a warning vs. arrest on felony charges).

Dependent Variables

After each crime report a series of questions asked respondents to report their impressions of the alleged suspect, inferences about suspect culpability and likelihood of reoffending, and judgments about how they would handle the situation if they were called to the scene.

Trait Ratings. Twelve trait ratings were collected, where a trait and its polar opposite were presented on 7-point rating scales. Three composites were constructed from the 12 ratings. The first composite was labeled *immature* and consisted of ratings on four traits anchored at *gullible–not gullible*, *naïve–street smart*, *impressionable–not impressionable*, and *vulnerable–not vulnerable* ($\alpha = .66$). The second composite, labeled *violent*, consisted of four trait ratings anchored at *violent–nonviolent*, *dangerous–harmless*, *aggressive–passive*, and *hostile–nonhostile* ($\alpha = .75$). The third composite, labeled *bad character* comprised ratings to four traits anchored at *dishonest–honest*, *bad–good*, *unfriendly–friendly*, and *unlikable–likeable* ($\alpha = .72$).

Perceived Culpability. Next respondents rated on 7-point scales the likelihood that a crime was committed, the suspect's awareness that his actions were a criminal act for which he could be prosecuted, whether the suspect intended to commit a crime, and how responsible (blameworthy) he was for the alleged crime. Those four ratings were averaged to create a measure of perceived suspect culpability ($\alpha = .51$). We acknowledge the low alpha for perceived culpability and the need for caution when interpreting results for that measure. We chose to keep the culpability measure in tact for theoretical reasons and analyses described at the end of Experiment 2 partly address the problem of measurement error.

Expected Recidivism. An expected recidivism measure was created by averaging the ratings to two questions about the likelihood that the suspect would commit similar and more serious crimes in the future ($\alpha = .77$).

Punishment Severity. Finally participants were presented with three possible ways to handle the situation if they were called to the scene. The options were (1) *let the suspect off with a warning*; (2) *arrest the suspect on misdemeanor charges*; and

(3) *arrest the suspect on felony charges*. Respondents were asked to choose the one option that they would most likely take. Those choices were coded on a 3-point scale that captured increased punishment severity.

Conscious Prejudice. Many studies of consciously held stereotypes or prejudice against African Americans have used some variant of the self-report Modern Racism Scale (MRS; McConahay, Hardee, & Batts, 1981). We used the 7-item MRS in which respondents indicated their agreement on 5-point scales with statements such as *Discrimination against Blacks is no longer a problem in the United States and Over the past few years Blacks have gotten more economically than they deserve* ($\alpha = .77$). The MRS was embedded in a "general attitudes and beliefs questionnaire" that participants completed following the priming portion of the study. The questionnaire included a number of filler items that tapped social and political attitudes, such as belief in a just world (Lerner, 1980) and social dominance orientation (Sidanius & Pratto, 1999).

After all data were collected, participants were probed for suspicion. Two male respondents in the racial priming condition reported that they believed that flashing stimuli during the "mind clearing task" were actual words, but they could not recall any of those words. No respondent suspected that the two parts of the study were related. We did not conduct a full debriefing about the priming manipulation at this time because a number of officers from the same precinct, although on different shifts, were to be interviewed. Participants were thanked for their participation and paid $50. After all data on a shift were collected, participants were debriefed

Results

Overview

First we analyzed frequency of correct response to a series of control questions that measured participants' attention to key elements in the two crime scenarios (i.e., age, prior record, and ethnicity of the alleged offender). Then we examined the effect of the priming manipulation on the dependent variables, followed by an analysis of the possible moderating role of conscious prejudice.

Stimuli Recall

After completing the dependent measures for crime reports and before completing the self-report attitude measures, we asked participants three questions about the two hypothetical offenders as checks on their attention to the stimulus materials. Using an open-ended format, participants were asked to state the age and ethnicity of the offender and, by checking *yes*, *no*, or *unsure*, whether he had a prior record. Correct recall would be indicated by stating that the offender was either a 12-year-old (Suspect A, the alleged shoplifter) or a 15-year-old (Suspect B, the alleged assaulter), that no information about ethnicity was given, and that he had no prior police record. The left panel of Table 1 shows the percentage of police officers who responded correctly to those questions.

Correct recall of the suspect's age (within 1 year) and the fact that he had no prior police record were very high across priming condition, with cell percentages

Table 1. Percentage of Respondents Reporting the Correct Response to the Recall Questions: Experiments 1 and 2

	Experiment 1: police officers				Experiment 2: probation officers			
	Suspect A		Suspect B		Suspect A		Suspect B	
	Prime		Prime		Prime		Prime	
Question	Race	Neutral	Race	Neutral	Race	Neutral	Race	Neutral
n	54	51	54	51	48	43	48	43
Correct age (+1)	91%	96%	100%	94%	85%	82%	96%	91%
No prior record	100	92	91	92	94	98	94	91
Ethnicity								
Unknown	78	80	78	78	63	67	50	67
Black	13	14	9	18	23	12	27	14
Latino	4	2	2	2	4	14	8	7
White	5	4	11	2	10	7	15	12

ranging from 91 to 100% correct. For the ethnicity question, we did not expect the prime to have an influence on consciously recalled information about ethnicity of the offender. That is, priming the racial category *Black* at an unconscious level should not affect judgments when race is made salient to respondents (e.g., brought to the conscious level). The left panel of Table 1 shows that the correct response to the ethnicity question (i.e., unknown, unstated) was offered by close to 80% of the police sample. When ethnicity was incorrectly reported, police officers were somewhat more likely to "recall" that Suspects A and B were African American than either Latino or White. However, those recall frequencies did not significantly differ by priming condition for either Suspect A or Suspect B, respectively: $\chi^2(3) < 1$ and $\chi^2(3) = 4.68$, $p > .10$.

Priming Effects

Preliminary Analyses. We first conducted a series of 2 × 2 (Prime condition × Crime report) repeated measures analyses of variance (ANOVA) on each dependent variable, with crime report (12-year-old shoplifter and 15-year-old assailant) as the repeated factor. There were no interactions involving the repeated factor for any of the dependent variables. The data were therefore averaged across report type for all subsequent analyses. Because preliminary analyses showed no main or interaction effects involving gender or ethnicity of participants, those variables also are ignored in the remaining analyses. We report the results of a one-way multivariate analysis of variance (MANOVA) to determine the effect of priming condition (race prime or neutral) on four dependent variable types: trait ratings (immature, violent, bad character), perceived culpability, expected recidivism, and endorsed punishment.

Main Analyses. The multivariate main effect of priming condition was significant: Wilks' $\Lambda = .81$, $F(6, 97) = 3.90$, $p < .01$, $\eta^2 = .19$. Table 2 shows the means and standard deviations on the dependent variables by priming condition. Also shown for each dependent variable are the *F* values for univariate ANOVAs and their accompanying effect sizes, calculated as eta square (η^2). As a rule of thumb, η^2 of .01 is considered small, .09 as medium, and .25 or greater as large (Cohen, 1977).

Table 2. Means and Standard Deviations on the Dependent Variables as a Function of Priming Condition: Experiment 1 (Police Officers)

	Priming condition						
	Race		Neutral				
Variable	*M*	*SD*	*M*	*SD*	$F(1, 102)$	*p*	η^2
Traits							
Immature	3.5	0.83	4.0	0.91	8.54	.004	.08
Violent	4.7	0.75	4.5	0.71	1.53	*ns*	.02
Bad	4.6	0.67	4.4	0.70	2.54	*ns*	.02
Global	4.6	0.59	4.3	0.56	6.87	.010	.06
Culpability	5.5	0.61	5.2	0.70	6.57	.012	.06
Expectancy	4.5	0.87	4.4	0.97	<1	*ns*	.00
Punishment	2.0	0.43	1.8	0.40	7.02	.009	.06

Note. All variables range from 1 to 7 except punishment, which ranges from 1 to 3.

Table 2 shows that all of the mean differences were in the hypothesized direction and those that were significant achieved effect sizes approaching the moderate level. For trait ratings, as predicted, police officers in the race prime condition judged the hypothetical offenders to be less immature (i.e., more adult-like) compared to those in the neutral prime condition. The differences for perceived violence and bad character were not significant. We also averaged across the trait ratings to create a global negative trait rating, scored in the direction of less immaturity, more violence, and bad character ($\alpha = .84$). Respondents who were unconsciously primed to think about the category *Black* judged the alleged offenders to have more generalized negative traits. Table 2 also reveals that officers in the race prime condition judged the offenders to be more culpable and they endorsed harsher sanctions.[6]

Effects of Conscious Prejudice

We included the Modern Racism Scale (MRS), a well-validated explicit measure of prejudice, to examine whether conscious beliefs moderated the priming effects. In hierarchical regression analysis, each dependent variable (traits, culpability, expectancy, and punishment) was regressed on the predictors (unconscious and conscious beliefs) in three steps. The priming manipulation was entered at Step 1. Conscious self-report measures were entered at Step 2 to examine their main effects after controlling for the prime. Terms representing the interaction between the prime and each conscious belief were entered at Step 3 to examine the moderating influences of conscious beliefs. In no case did conscious prejudice, either as a main effect or moderator, result in significant increments in variance accounted for, over and above that due to the priming manipulation (all $\Delta R^2 < .01$, *p*s $> .10$).

[6]Because respondents chose from among three possible options (send home with a warning, charge with a misdemeanor, and charge with a felony)), the measure of punishment could also be considered as a categorical variable. We tested the relation between priming condition and choice of punishment in a 2×3 contingency analysis separately for the two crime reports. For Suspect A the relationship was significant: likelihood ratio $\chi^2(2) = 6.10$, $p < .05$. For Suspect B, the relationship approached significance: $\chi^2(2) = 4.74$, $p = .09$. For both alleged suspects, more police officers in the race prime condition selected the harsher options.

Discussion

Experiment 1 provided partial support for our hypothesis that racial stereotypes could be unconsciously primed and that, once activated, those stereotypes would guide attributionally relevant judgments about the alleged offender and his crime. Not all of the judgments yielded significant priming effects, but those that did were meaningful. Police officers in the race prime condition were less likely to judge the offender as immature (by virtue of adolescence) and more likely to perceive him as culpable and deserving of punishment. In contrast, consciously held beliefs and attitudes about race did not influence attribution-related judgments, suggesting that we were successful in activating implicit racial bias outside of the respondent's conscious awareness.

We chose to study police officers in Experiment 1 because they often represent the first point of contact with the justice system for youthful offenders and they enjoy wide discretion in their decision-making, especially in the context of relatively minor offenses (e.g., Engel, Shepherd, Sobol, & Worden, 2000). We also suggested that police–juvenile encounters often occur under legally and causally ambiguous circumstances where judgments have to be made quickly but with limited information—in other words, the kinds of decision-making contexts most vulnerable to unconscious stereotype use. Thus police officers are a logical starting point for studies of how decision maker bias might affect the outcomes of adolescents of color as they penetrate the justice system.

Extending our analysis, we also wanted to test the generality of priming effects with other decision makers whose encounters with youthful offenders may take place at different decision points. Following an arrest, for example, juvenile probation officers are typically responsible for intake decisions—that is, whether a case should be dropped, treated informally, or referred to the juvenile court for formal processing. Although juvenile probation officers are particularly trained to deal with troubled youth, their decision-making about ethnic minority offenders can also be influenced by (conscious) attributional bias, as revealed in Bridges and Steen's (1998) study of probationers' court recommendations. In Experiment 2 we therefore attempted to replicate the findings of Experiment 1 with a sample of juvenile probation officers who worked in communities similar to the police officers in Experiment 1.

EXPERIMENT 2: PROBATION OFFICERS

Method

Participants

Participants were 91 active juvenile probation officers (43 males and 47 females) recruited from six different probation offices in an urban setting. Like the police sample, the probation group was ethnically diverse: 51% African American ($n = 46$), 25% Caucasian ($n = 23$), 13% Asian or biracial ($n = 12$), and 11% Latino ($n = 10$). However, the probation sample was slightly older (M age = 42.5 years) and more experienced ($M = 13.83$ years working in probation).

Procedure

Recruitment and experimental procedures used in Experiment 2 were identical to those in Experiment 1. Dependent measures also were the same with two exceptions. First, the punishment severity question was adjusted to reflect options that would be more appropriate for a juvenile probation officer in the district where the study was conducted. Respondents therefore selected among four options: (1) *let the suspect off with a warning*; (2) *place the suspect on informal probation*; (3) *cite the suspect to Juvenile Traffic Court*; (4) *refer the suspect to the District Attorney*. Those choices were coded on a 4-point scale of increasing severity.

The second change was the inclusion of a different self-report measure of conscious prejudice that might tap a more subtle type of prejudice. We replaced the Modern Racism Scale (MRS) with the Internal and External Motivation to Respond Without Prejudice Scales (IMS and EMS, respectively; Plant & Devine, 1998). The IMS measures personal motivation to respond in a nonprejudiced way. We included five of the items on that scale, such as *Because of my personal values, I believe that using stereotypes about Black people is wrong*. Responses were made on 9-point scales using an agree–disagree format ($\alpha = .61$). The IMS correlates negatively with other conscious measures like the MRS (Plant & Devine, 1998). The EMS, in contrast, measures external pressure to respond without prejudice (e.g., *I try to avoid negative thoughts about Black people in order to avoid negative reactions from others*) and it correlates positively with other self-report prejudice instruments. We used a 3-item EMS subscale in this study ($\alpha = .69$).

With the exception of trait ratings to bad character ($\alpha = .45$), the other dependent measures that remained from Experiment 1 had acceptable reliabilities in the probation sample: immaturity ($\alpha = .66$), violence ($\alpha = .75$), perceived culpability ($\alpha = .66$), and expected recidivism ($\alpha = .77$). Even though alpha for the trait of bad character was low, aggregating all of the trait ratings as in Experiment 1 produced a global trait scale with good internal consistency ($\alpha = .78$).

Results

Overview

In Experiment 2 we followed the same analytic procedure used in Experiment 1. First we analyzed frequency of correct responses to a series of control questions that measured participants' attention to key elements in the two crime scenarios (i.e., age, prior record, and ethnicity of the alleged offender). Then we examined the effect of the priming manipulation on the dependent variables, followed by an analysis of the possible moderating role of conscious prejudice. In a final analysis, data from the two experiments were combined to examine relationships between variables using structural equation modeling.

Stimuli Recall

The right half of Table 1 shows the recall data for the probation sample. Like the police sample in Experiment 1, probation officers were very accurate in recalling each

Table 3. Means and Standard Deviations on the Dependent Variables as a Function of Priming Condition: Experiment 2 (Probation Officers)

	Priming condition						
	Race		Neutral				
Variable	*M*	*SD*	*M*	*SD*	*F*(1,89)	*p*	η^2
Traits							
Immature	3.6	0.87	4.2	0.78	8.59	.004	.09
Violent	4.8	0.80	4.4	0.78	5.09	.027	.05
Bad	4.4	0.52	4.4	0.47	<1	*ns*	.00
Global	4.5	0.60	4.2	0.49	7.18	.009	.08
Culpability	5.4	0.72	4.9	0.75	11.91	.001	.19
Expectancy	4.8	0.99	4.3	0.90	7.27	.008	.08
Punishment	2.8	0.77	1.8	0.78	7.49	.007	.08

Note. All variables range from 1 to 7 except punishment, which ranges from 1 to 4.

suspect's age and the fact that he had no prior arrest record. For the ethnicity question there was more variability, with the correct response (i.e., unknown, unstated) offered by about two-thirds of the sample. When an ethnicity was incorrectly reported, respondents again were more likely to "recall" that the alleged offender was African American than either Latino or White. However, there were no differences in those frequencies as a function of priming condition; for Suspect A: $\chi^2(3) = 4.50$; and for Suspect B: $\chi^2(3) = 3.26$ (both ps $> .10$).

Priming Effects

As in Experiment 1, preliminary analyses showed no effects of the repeated factor (crime report) or of participant gender and ethnicity. The data were therefore averaged across these variables in the main analyses of priming effects. The results of the one-way MANOVA on the four dependent variable types are displayed in Table 3.

The multivariate main effect of priming condition was significant: Wilks' $\Lambda = .81$, $F(6, 84) = 3.36$, $p < .01$, $\eta^2 = .19$. As Table 3 shows, the effect of priming the category *Black* was replicated in the probation sample. Except for ratings of the offender's bad character, all of the judgments were significant and in the hypothesized direction. Probation officers in the race prime condition judged the alleged offender to be less immature and more violent, and their global trait ratings were more negative. Those primed with the racial category also viewed the offender as more culpable, more likely to reoffend, and more deserving of punishment.[7]

Effects of Conscious Prejudice

Internal and external motivations to avoid prejudice (IMS and EMS) were measured to examine whether conscious beliefs moderated the priming effects in

[7]When endorsed punishment was treated as a categorical variable with four levels, a 2×4 (Prime condition $\times$ Choice of punishment) contingency analysis was conducted for each crime report. For both reports, the relationship between experimental prime and punishment was significant. For Suspect A, likelihood ratio $\chi^2(3) = 8.54$ and for Suspect B, $\chi^2(3) = 9.24$ (both ps $< .05$). More probation officers in the race prime condition selected the harsher options for both suspects.

the probation sample. As in Experiment 1, unconscious beliefs (priming condition), conscious beliefs (IMS and EMS), and their interactions were entered in a series of hierarchical regression analyses predicting the four dependent variables. There were significant main effects of IMS for two dependent variables. Being internally motivated to avoid prejudice was positively related to perceiving the offender as having a bad character ($\beta = .29$, $p < .01$) and as being more culpable ($\beta = .20$, $p < .05$). However, there were no main effects involving external motivation to avoid prejudice nor any significant interactions involving either conscious belief.[8]

In summary, we replicated the priming of unconscious stereotypes in Experiment 2 with a different sample of actual decision makers in the juvenile justice system. Moreover, the regression analyses in both experiments lead us to conclude that consciously held racial attitudes had negligible effects on attribution-related judgments about hypothetical adolescent offenders.

STRUCTURAL EQUATION MODELING: EXPERIMENTS 1 AND 2

The analyses thus far have documented the effects of priming unconscious stereotypes (but not conscious attitudes) on individual dependent variables. From an attributional perspective, those dependent variables are assumed to be interrelated in a systematic way. We hypothesize that unconscious stereotypes about African Americans first influence trait-like judgments about immaturity, violence, and the character of adolescent offenders. Negative traits, in turn, carry attributional information about perceived culpability of the offender and the likelihood that he will reoffend. The attributional inferences then directly influence judgments about how harshly the offender should be treated. Thus the effect of stereotype activation on decision-making is indirect, that is, mediated through trait inferences more distally and attributional inferences more proximally.

We tested this hypothesized temporal sequence using structural equation modeling (SEM). The tested model is shown in Fig. 1. Each of the hypothesized mediators was represented by a latent variable. The latent variable "negative traits" comprised trait composites that measured immaturity (reverse scored in the direction of being perceived as more adult-like), violence, and bad character. Culpability comprised ratings of whether the offender committed a crime, as well as his perceived awareness, intentionality, and responsibility. Expected recidivism was represented by a latent variable that consisted of ratings of whether the offender would commit similar and more serious crimes in the future.

Table 4 shows the correlations between the variables used in the analysis. Because the pattern of relations between variables was almost identical between samples (there were no significant group differences using *r*-to-*z* transformations), we combined the police and probation officer data for the SEM analysis. That yielded a

[8]Because conscious attitudes were assessed after the priming manipulation in both experiments, we also examined whether those attitudes were influenced by the manipulation. In the police sample, a one-way ANOVA on the MRS showed no effect of priming condition ($F < 1$). Similarly in the probation sample, priming unconscious racial stereotypes did not significantly influence either IMS or EMS (both Fs < 2, ps $> .10$).

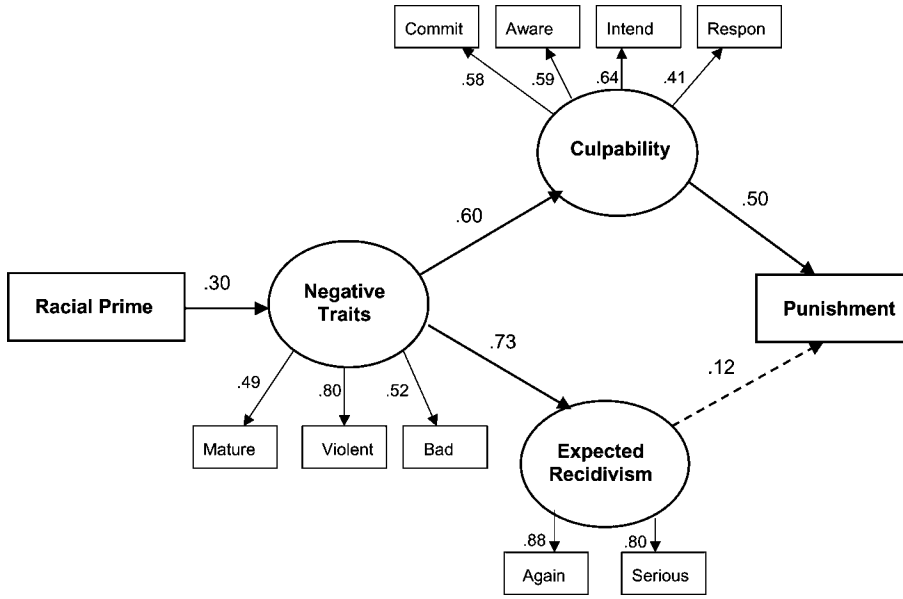

Fig. 1. Measurement and structural model of relations between racial priming, negative trait inferences, perceived culpability, expected recidivism, and endorsed punishment of hypothetical adolescent offenders.

more appropriate sample size ($N = 195$) given the number of parameters (25) to be estimated.[9]

SEM allows for the simultaneous assessment of both the measurement and structural models. That is, all factor loadings and regression weights were estimated together. For the measurement model, Fig. 1 shows that the standardized indicator loadings that were estimated for each latent variable were all above .40 and all were statistically significant. The structural model in Fig. 1 shows the standardized regression coefficients for the hypothesized paths between latent variables. All of the paths were significant (all ps $< .01$) except that from expected recidivism to punishment. The racial prime predicted negative trait ratings ($\beta = .30$), traits predicted the attributional variables of culpability ($\beta = .60$) and expectancy ($\beta = .73$), and the more culpable the offender was perceived to be, the greater the endorsed punishment ($\beta = .50$). Thus, as predicted, the path from priming unconscious racial stereotypes to harsher punishment was indirect (standardized coefficient for indirect effect = .12, $p < .05$), that is, mediated by trait inferences and attributional judgments.

We tested the fit of the model shown in Fig. 1 using several criteria: the chi-square test, the Comparative Fit Index (CFI; Bentler, 1990), and the root mean squared error of approximation (RMSEA; Steiger, 1990). A nonsignificant chi-square indicates good model fit, as does a ratio of chi-square to degrees of freedom that is less than 2. A CFI at or above .95 and a RMSEA at or below .06 also indicate good fit. Using those

[9]Before the analysis, the 4-point punishment scale used in the probation sample was recoded as a 3-point scale to be consistent with the scoring of that variable in the police sample.

Table 4. Correlations Between Observed Variables, Combined Across the Two Samples ($N = 195$)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Prime	—										
2. Mature[a]	.29***	—									
3. Violent	.18*	.40***	—								
4. Bad Char.	.11	.38***	.39***	—							
5. Commit	.23**	.25***	.33***	.21**	—						
6. Aware	.19**	.19**	.29***	.20**	.40***	—					
7. Intend	.22**	.17*	.28***	.18*	.30***	.42***	—				
8. Respons	.18*	.10	.22**	.12	.24***	.17*	.33***	—			
9. Again	.12	.24***	.52***	.36***	.35***	.26***	.31***	.14	—		
10. Serious	.13	.22**	.48***	.27***	.28***	.22**	.26***	.07	.71***	—	
11. Punish	.26***	.08	.41***	.18*	.29***	.28***	.40***	.22**	.32***	.30***	—

[a]Mature: the immaturity trait scale reverse scored. Bad char: bad character. Respons: responsibility.
*$p < .05$. **$p < .01$ ***$p < .001$.

criteria, the model fit the data moderately well: $\chi^2(41) = 65.28$, $p < .01$; $\chi^2/df = 1.6$; CFI = .95, RMSEA = .06.

Inspection of the modification indices revealed that freeing the path from the priming manipulation to perceived culpability ($\beta = .23$, $p < .01$) resulted in an improved model: $\chi^2(40) = 57.13$, $p < .05$; $\chi^2/df = 1.4$; CFI = .97, RMSEA = .05. That model represented a significant improvement over the tested model: $\Delta\chi^2(1) = 8.15$, $p < .001$. Racial priming influenced judgments about offender culpability both directly and indirectly through trait inferences.

GENERAL DISCUSSION

The results of these two studies offer new insights into the problem of racial disparities in the juvenile justice system. At least some of that disparity might be due to the unconscious racial stereotypes of those who determine the fate of offending youth. In their purest form, unconscious stereotypes occur without awareness, intention, control, or effort. Simulating those conditions with experimental priming, our findings suggest that unconscious stereotypes can be activated in police and probation officers; once activated, stereotypes influenced attributionally relevant judgments about offenders' negative traits, culpability, likely recidivism, and deserved punishment. These judgments were hypothesized to be interrelated in a systematic way and the results of SEM analyses supported the predicted relationships. From an attributional perspective, racial disparity in the juvenile justice system can partly be understood as the outcome of a complex causal process that begins with unconscious stereotype activation and ends with more punishment of African American offenders.

The effects of priming on attributional process in these studies were quite general. They were not influenced by type of alleged crime of the hypothetical offender, nor by characteristics of decision makers, including their gender, ethnicity, consciously held attitudes about African Americans, or desire to avoid prejudice. Hence, automatic stereotype activation does not require perceivers to endorse the stereotype, to dislike African Americans, or to hold any explicit prejudice toward that group. Even decision makers with good intentions are susceptible.

The Specificity of Priming Effects

Using college student research subjects and hypothetical adult stimulus persons, most of the racial priming literature has focused on traits related to hostility and violence as the primary dependent variables. In the present studies, using real decision makers as participants and adolescent stimulus persons, we documented a particular pattern of priming effects that was more unique to adolescents and thus has implications for the contemporary juvenile court. In both studies, the trait ratings associated with immaturity were more influenced by racial stereotypes than were ratings associated with violence or bad character (see Tables 2 and 3). Officers who were induced to think about African Americans were especially likely to judge hypothetical juvenile offenders as *not* vulnerable, impressionable, gullible, and naïve. Of the attribution-related judgments, perceived culpability was more responsive to racial priming than was expected recidivism in both samples.

The relation between immaturity and culpability is a critical one among reform-minded jurists who adhere to the rehabilitative goals of the juvenile court. Compared to adults, adolescents are known to display considerable immaturity—for example, in their decision-making, risk preferences, susceptibility to peer influence, and orientation to the future (Cauffman & Steinberg, 2000; Scott, 2000). That immaturity has become the basis for the argument that a rehabilitative juvenile system should be preserved, and in that system adolescents should be judged as less culpable than adults (see Steinberg & Scott, 2003). In the language of the law, adolescent immaturity is comparable to diminished capacity. Both are mitigating conditions that reduce culpability and deserved punishment.

It does not bode well for African American adolescent offenders if unconscious biases trigger the belief that they are adult-like and therefore as blameworthy as adults who commit similar crimes. African American youth are about three times more likely than White youth to be waived to the adult court (McCord et al., 2001) and in some cases they have received sentences greatly disproportionate to their crime. A case in point is Lionel Tate, the Florida youth waived to the adult court and sentenced to life in prison without possibility of parole for killing a playmate when he was 12 years old. It took 3 years for the Tate decision to be overturned and for Lionel to be granted a new trial. We believe that the contemporary and more punitive juvenile court and the relaxing of standards for waiver to adult court are in part a by-product of unconscious associations between race, (im)maturity, and culpability, as well as the belief that the most violent African American offenders should be treated more like hardened criminals than like redeemable youth.

Can Unconscious Stereotypes be Changed?

Even though racial stereotypes are often triggered automatically, that does not mean they are inevitable and unchangeable. Recent research has documented that the automatic operation of stereotypes can be attenuated by changes in perceivers' goals and intentions as well as changes in the social environment (see review in Blair, 2002). For example, perceivers learned to suppress automatic stereotypes about skinheads and African Americans when they were given repeated practice with negating stereotypic associations (just say "no") and affirming positive associations

(Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000). Learning to focus on counter-stereotypic associations, as when perceivers are told to create a mental image of a strong woman, also has been shown to reduce automatic gender stereotypes (Blair, Ma, & Lenton, 2001). In addition, the context in which racial cues are imbedded can change the threshold for stereotype activation. Wittenbrink, Judd, and Park (2001) found that automatic stereotypes about African Americans were much harder to activate when subliminally primed Black faces were embedded in pictures of churches rather than street corners. All of these studies suggest that automatic stereotypes can be changed by unlearning negative associations.

Although encouraging, research on the effects of negation training, counter-stereotypic exemplars, and positive social context do not offer much in the way of practical suggestions for the amelioration of unconscious racial bias among decision makers in the juvenile justice system. It would be extremely difficult for a police or probation officer to imagine a counter-stereotypic exemplar every time they encountered an African American suspect, and the social settings in which those encounters take place (e.g., street corners, not churches) are most likely to activate negative associations.

Recent findings that focus on the role of social relationships in stereotype malleability may offer more in the way of pragmatic suggestions for change. For example, it has been documented that when perceivers are motivated to develop a relationship with a member of a stereotyped group (Lowery, Hardin, & Sinclair, 2001) or to form a good impression of that person (Sinclair & Kunda, 1999), then automatic stereotype activation is inhibited. When motivated by relationship concerns, perceivers engage in what Lowery et al. (2001) call "social tuning." They spontaneously adjust their attitudes and behavior to be more consistent with the attitudes of the target. We believe that social tuning holds promise as a strategy for changing unconscious beliefs of decision makers in the juvenile justice system. Inhibiting racial stereotypes may be less a function of unlearning negative associations, which requires extensive training, practice, and vigilance, than of exercising good relationship-building skills, as in establishing rapport and trust among vulnerable youth. Relationship building in legal discourse has been discussed mainly in the context of adolescents' adjudicative competence and their attorneys' capacities to effectively represent them (e.g., Buss, 2000; Grisso et al., 2003). That discourse might be enhanced by attention to the subtle but powerful impact of racial stereotypes.

Limitations of the Research

We acknowledge the limitations of the laboratory approach to studying unconscious stereotypes that was presented here. Although actual decision makers rather than college students were participants, subliminal priming is still an experimental method for activating racial bias and participants made judgments about hypothetical offenders who allegedly committed hypothetical transgressions. Thus we asked about the *possibility* that stereotypes could bias trait ratings and attributional inferences and the *likelihood* that those inferences would influence punishment deservedness if certain conditions were present. We do not claim that these inferences map perfectly on to the way real-world decisions are made. Nonetheless, we believe

that experimental studies and role-playing methods have heuristic value when the researcher's goal is to test new models of complex decision-making.

A FINAL NOTE

Although we chose to study police officers and probation officers in these studies, we are not singling out those decision makers as more prone to or vulnerable to unconscious racial bias. We could just as well have studied juvenile defense attorneys, prosecutors, or judges; the cases of Lionel Tate and other high profile Black offenders attest to that. Moreover, because Zero Tolerance and related "get tough" policies in schools have produced racial disparities in the use of disciplinary practices (see Skiba, 2001), we could also have started with unconscious stereotypes of teachers and administrators in our urban schools. One clear theme in contemporary social psychology is the ubiquity of automatic mental processes, including racial stereotyping, in everyday life (Bargh & Chartrand, 1999). Situating the root causes of racial disparity in basic social cognitive process rather than (in addition to) institutional racism and overt prejudice provides new opportunities to think about intervention at the individual level. Because stereotypes are amenable to change, we can educate decision makers in our juvenile courts and in our schools to be more aware of the nature and function of their biases. We see this as a useful starting point for applying our knowledge from social psychology to a complex problem of great social significance.

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REFERENCES

Abreu, J. M. (1999). Conscious and nonconscious African American stereotypes: Impact on first impression and diagnostic ratings by therapists. *Journal of Consulting and Clinical Psychology*, *67,* 387–393.

Amodio, D. M., Harmon-Jones, E., & Devine, P. G. (2003). Individual differences in the activation and control of affective race bias as assessed by startle eyeblink response and self-report. *Journal of Personality and Social Psychology*, *84,* 738–753.

Bargh, J. A. (1994). The four horsemen of automaticity: Awareness, efficiency, intention, and control in social cognition. In R. S. Wyer Jr. & T. K. Srull (Eds.), *Handbook of social cognition* (2nd ed., pp. 1–40). Hillsdale, NJ: Erlbaum.

Bargh, J. A., & Chartrand, T. L. (1999). The unbearable automaticity of being. *American Psychologist*, *54,* 462–479.

Bargh, J. A., & Chartrand, T. L. (2000). The mind in the middle: A practical guide to priming and automaticity research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253–285). New York: Cambridge University.

Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype priming on action. *Journal of Personality and Social Psychology*, *71,* 230–244.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107,* 238–246.

Blair, I. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review*, *6,* 242–261.

Blair, I. V., Ma, J. E., & Lenton, A. P. (2001). Imagining stereotypes away: The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology*, *81,* 828–841.

Bridges, G. S., & Steen, S. (1998). Racial disparities in official assessments of juvenile offenders: Attributional stereotypes as mediating mechanisms of juvenile offenders. *American Sociological Review*, *63,* 554–571.

Buss, E. (2000). The role of lawyers in promoting juveniles' competence as defendants. In T. Grisso & R. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp. 243–265). Chicago: University of Chicago Press.

Carroll, J. S., & Payne, J. W. (1977). Crime, seriousness, recidivism risk, and causal attributions in judgments of prison term by students and experts. *Journal of Applied Psychology*, *72,* 595–602.

Carroll, J. S., & Wiener, R. L. (1982). Cognitive social psychology in court and beyond. In A. H. Hastorf & A. M. Isen (Eds.), *Cognitive social psychology* (pp. 213–254). New York: Elsevier.

Cauffman, E., & Steinberg, L. (2000). Researching adolescents' judgments and culpability. In T. Grisso & R. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp. 325–344). Chicago: University of Chicago Press.

Chen, M., & Bargh, J. A. (1997). Nonconscious behavioral confirmation processes: The self-fulfilling nature of automatically-activated stereotypes. *Journal of Experimental Social Psychology*, *33,* 541–560.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences (Rev. Ed.). New York: Academic Press.

Correll, J., Park B., Judd, C. M., & Wittenbrink, B. (2002). The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality and Social Psychology*, *83,* 1314–1329.

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, *56,* 5–18.

Devine, P. G., & Elliot, A. J. (1995). Are racial stereotypes really fading? The Princeton trilogy revisited. *Personality and Social Psychology Bulletin*, *21,* 1139–1150.

Dorfman, L., & Schiraldi, V. (2001). *Off balance: Youth, race, and crime in the news*. Washington, DC: Building Blocks for Youth Initiative.

Dovidio, J. F., Evans, N., & Tyler, R. B. (1986). Racial stereotypes: The contents of their cognitive representations. *Journal of Experimental Social Psychology*, *22,* 22–37.

Dovidio, J., Kawakami, K., Johnson, C., Johnson, B., & Howard, A. (1997). On the nature of prejudice: Automatic and controlled processes. *Journal of Experimental Social Psychology*, *33,* 510–540.

Engel, R., Shepherd, R., Sobol, J., & Worden, R. (2000). Further exploration of the demeanor hypothesis: The interaction effects of suspects' characteristics and demeanor on police behavior. *Justice Quarterly*, *17,* 235–258.

Feld, B. (1995). The social context of juvenile justice administration: Racial disparities in an urban juvenile court. In K. K. Leonard, C. E. Pope, & W. H. Feyerherm (Eds.), *Minorities in juvenile justice* (pp. 66–97). Thousand Oaks, CA: Sage.

Fiske, S. T. (1998). Stereotyping, prejudice, and discrimination. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 357–411). New York: McGraw-Hill.

Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). New York: McGraw-Hill.

Gilliam, F. D., Jr., & Bales, S. N. (2001). Strategic frame analysis: Reframing America's youth. *Social Policy Report*, *15,* 2–24.

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, *102,* 4–27.

Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., et al. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, *27,* 333–363.

Jones, M., & Poe-Yamagata, E. (2000). *And justice for some*? Washington, DC: Building Blocks for Youth.

Kawakami, K., Dovidio, J. F., Moll, J., Hermsen, S., & Russin, A. (2000). Just say no to stereotyping: Effects of training in the negation of stereotypic associations on stereotype activation. *Journal of Personality and Social Psychology*, *78,* 871–888.

Krueger, J. (1996). Personal beliefs and cultural stereotypes about racial characteristics. *Journal of Personality and Social Psychology*, *71,* 536–548.

Leonard, K., Pope, C., & Feyerherm, W. (Eds.). (1995). *Minorities in juvenile justice*. Thousand Oaks, CA: Sage.
Lepore, L., & Brown, R. (1997). Category and stereotype activation: Is prejudice inevitable? *Journal of Personality and Social Psychology*, *72,* 275–287.
Lerner, M. J. (1980). *The belief in a just world*. New York: Plenum.
Lowery, B. S., Hardin, C. D., & Sinclair, S. (2001). Social influence effects on automatic racial prejudice. *Journal of Personality and Social Psychology*, *81,* 842–855.
McConahay, J. B., Hardee, B. B., & Batts, V. (1981). Has racism declined in America? It depends on who is asking and what is asked. *Journal of Conflict Resolution*, *25,* 563–579.
McCord, J., Widom, C. S., & Crowell, N. A. (Eds.). (2001). *Juvenile crime, juvenile justice*. Washington, DC: National Academy Press.
Payne, B. K. (2001). Prejudice and perception: The role of automatic and controlled processes in misperceiving a weapon. *Journal of Personality and Social Psychology*, *81,* 181–192.
Plant, E., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, *75,* 811–832.
Schaller, M., Park, J. H., & Mueller, A. (2003). Fear of the dark: Interactive effects of beliefs about danger and ambient darkness on ethnic stereotypes. *Personality and Social Psychology Bulletin*, *29,* 637–649.
Schuman, H., Steeh, C., Bobo, L., & Krysan, M. (1997). *Racial attitudes in America: Trends and interpretations*. Cambridge: Harvard University Press.
Scott, E. (2000). The legal construction of adolescence. *Hofstra Law Review*, *29,* 547–598.
Scott, E., & Steinberg, L. (2003). Blaming youth. *Texas Law Review*, 81, 799. Retrieved from www.macadoldev-juvjustice.org
Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York: Cambridge University Press.
Sinclair, L., & Kunda, Z. (1999). Reactions to a Black professional: Motivated inhibition and activation of conflicting stereotypes. *Journal of Personality and Social Psychology*, *77,* 885–904.
Skiba, R. J. (2001). When is disproportionality discrimination?: The overrepresentation of black students in school suspension. In W. Ayers, B. Dohrn, & R. Ayers (Eds.), *Zero tolerance: Resisting the drive for punishment in our schools* (pp. 176–187). New York: New Press.
Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, *25,* 173–180.
Steinberg, L., & Scott, E. (2003). Less guilty by reason of adolescence: Developmental immaturity, diminished responsibility, and the juvenile death penalty. *American Psychologist*, *58,* 1009–1018.
Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92,* 548–573.
Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. New York: Guilford Press.
Wittenbrink, B., Judd, C. M., & Park, B. (2001). Spontaneous prejudice in context: Variability in automatically activated attitudes. *Journal of Personality and Social Psychology*, *81,* 815–827.